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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,391	09/25/2001	Kenneth J. Carstensen		5498

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EXAMINER

FLANDRO, RYAN M

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 01/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/961,391

Applicant(s)

CARSTENSEN, KENNETH J.

Examiner

Ryan M Flandro

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 3,4,6-14,16,17 and 19-27 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29 and 30 is/are allowed.
- 6) ☒ Claim(s) 1,2,5,15,18 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Specification

2. In light of Applicant's Amendment submitted 08 September 2003, the objections to the specification are hereby withdrawn.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 08 September 2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner. Additionally, Applicant's resubmission of the prior art referenced in the first IDS (paper no. 4) is acknowledged.

Claim Objections

4. In light of Applicant's Amendment filed 08 September 2003, the objection to claim 1 set forth in the previous Office action (paper no. 10) is hereby withdrawn.
5. Claim 18 is objected to because it is unclear what recitation of the "end plane" is referring to. For purposes of examination, the Examiner has assumed this to mean the end face of the opposing male inserted member.

Claim Rejections - 35 USC § 112

6. Claims 18 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 18. Again, the Examiner stresses that the recitation of “API specifications” renders the claims indefinite. Where a government or industry standard is used in a claim as a limitation, the claim does not comply with the requirements of 35 U.S.C. §112, second paragraph, because the claim scope is uncertain since standards are subject to change over time. **In order to overcome this rejection, the title and effective date of the standard applied should be included in the specification** (no new matter can be entered).

b. Claim 28. The recitation of “manufacturer’s specifications” renders the claims indefinite. Where a government or industry standard is used in a claim as a limitation, the claim does not comply with the requirements of 35 U.S.C. §112, second paragraph, because the claim scope is uncertain since standards are subject to change over time. Applicant’s addition of the particular edition of API specs may apply to “API specifications” but does not render “manufacturer’s specifications” any more definite. **In order to overcome this rejection, the effective date and particular manufacturer of the standard applied should be included in the specification** (no new matter can be entered). Applicant is also encouraged to file a copy of the manufacturer’s specs, (excerpts of the applicable portions are acceptable), via an information disclosure statement filed in accordance with 37 CFR 1.97 and 1.98.

Claim Rejections - 35 USC § 102

7. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Larsson (US 4,968,068).

a. Claim 1. Larsson (see primarily figure 2) shows a connection for sucker rods used in strings in petroleum wells comprising a pair of sucker rods **12' and 12''**, each having a pin end **11' and 11''** with a flat traverse end face **16' and 16''** and at least an adjacent male threaded section **10' and 10''**; a coupler **18'** having at least two interior female threaded sections **17' and 17''** receiving the male threaded sections **10' and 10''** of the pin ends **11' and 11''**, wherein the pin ends **11' and 11''** of the sucker rods **12' and 12''** include coupler end engagement members **14' and 14''** spaced apart from the end faces **16' and 16''**. Larsson further discloses the pin ends **11' and 11''** being dimensioned in length relative to the coupler **18'** to provide compressional loading forces between opposing end faces **16' and 16''** of the pin ends **11' and 11''** when the male **10' and 10''** threaded sections are matingly inserted to preselected penetrations in the coupler **18'** past engagement of the coupler engagement members **14' and 14''** with the coupler ends **18A'** (see figure 2; column 1 lines 56-59; column 2 lines 13-22; column 2 line 42 – column 3 line 42).

b. Claim 2. Larsson further shows the preselected penetration (see especially column 1 lines 13-22 & column 3 lines 1-10) for each pin end **11' and 11''** being to a chosen displacement beyond insertion to a hand tight plane, whereby (**inherently**) lengths of the pin end sections **11' and 11''** from the end faces **16' and 16''** are in compression and coextensive lengths of the coupler **18'** are in tension and the mating threads **10' and 10''**;

17' and 17'' lock under prestress to inhibit relative movement (see figure 2; column 1 lines 56-59; column 2 lines 13-22; column 2 line 42 – column 3 line 42).

Anticipation requires that a single prior art reference discloses, either expressly or under the principles of inherency, each and every element of the claimed invention. In re King, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986); RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.), cert. dismissed, 468 U.S. 1228 (1984). Anticipation, however, does not require such disclosure *in haec verba*. In re Bode, 550 F.2d 656, 660, 193 USPQ 12, 16 (CCPA 1977). In addition, it does not require that the prior art reference "teach" what the application at issue teaches. Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983). Finally, Applicant is reminded that during examination claim limitations are to be given their broadest reasonable reading. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). Larsson, as applied above, is believed to meet these requirements.

Claim Rejections - 35 USC § 103

8. Claim 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsson, as applied above, in view of any one of Reding et al (US 6,328,499) (Reding), Watson et al (US 5,347,881) (Watson) and Carlson (US 4,205,926).

a. Claim 5. Larsson, as applied above, lacks disclosure of a torque washer of a selected axial dimension with flat transverse sides and disposed centrally in the coupler between

the pin end faces and engaged on each side by the flat end faces of the pin ends. It is well known in the art, however, to provide a "torque washer" or divider between the end faces of two adjacent rods within a sleeve in order to more securely fix the connection, provide prestress to both screwed connections (see Reding figure 1 and column 2 lines 5-34) and to provide the capability of substituting more compressible insulating materials between the rods (see Carlson figures 6-10 and column 13 line 55 – column 14 line 57).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a torque washer in the connection of Larsson since this is well known in the art as evidenced by Reding, Watson and Carlson.

b. Claim 15. Larsson, as applied above, lacks disclosure of a torque element of a selected axial length disposed in the central region of the coupler and having transverse end faces; the end faces of the pin ends engaging the opposite end faces of the torque element. It is well known in the art, however, to provide a "torque element" or divider between the end faces of two adjacent rods within a sleeve in order to more securely fix the connection, provide prestress to both screwed connections (see Reding figure 1 and column 2 lines 5-34) and to provide the capability of substituting more compressible insulating materials between the rods (see Carlson figures 6-10 and column 13 line 55 – column 14 line 57). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a torque washer in the connection of Larsson since this is well known in the art as evidenced by Reding, Watson and Carlson.

Response to Arguments

9. Applicant's arguments, see paper no. 11, filed 08 September 2003, with respect to the rejection(s) of claim(s) 1, 2, 5, 15, 18, 28 and 29-30 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Larsson.

Allowable Subject Matter

10. Claims 29 and 30 are allowed.

11. Claims 18 and 28 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

12. The following is a statement of reasons for the indication of allowable subject matter:

a. Claim 18. The prior art, including Larsson, McCullough and Palone, either alone or in combination, fails to teach or disclose a torque disk having parallel planar faces spaced apart by an axial distance and the torque disk being of different material than the pin ends, where the spacing between the pin ends and the shoulders, and the axial distance between torque disk faces are selected such that, with thread makeup to an operative tightness, the end regions of the coupling are in compression coextensive with the pin neck regions and in tension coextensive with the torque disk, and pressure and frictional contact are maintained between the pin ends and torque disk and the end walls of the coupling and the pin shoulders.

b. Claim 28. The prior art, including Larsson, McCullough and Palone, either alone or in combination, fails to teach or disclose a torque disk having parallel planar faces spaced apart by a predetermined axial distance between the torque disk faces selected such that with thread makeup to an operative penetration in the coupling, the end regions of the coupling are in compression coextensive with the pin neck regions and the center region of the coupling is in tension coextensive with the torque disk, and a compressive force and frictional contact are maintained between the pin ends and the end walls of the coupling and the shoulders.

c. Claim 29. The prior art, including Larsson, McCullough and Palone, either alone or in combination, fails to teach or disclose a torque disk between the pin ends, and being made up with torque or circumferential displacement methods to establish compressive contact forces between the pin end shoulders and coupling end areas and pin thread end areas and the torque disk, and tension forces in pin neck areas and in the mid region of the sleeve coupling.

Conclusion

13. Due to the new rejections based on prior art not previously applied or cited in the case, those rejections not being necessitated by amendment, this action is **NON-FINAL**.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to sucker rod connections:

U.S. Patent 4,332,502 to Wormold et al. (see figure 3; lacks coupler end engagement shoulders as well as a torque element)

U.S. Patent 3,822,952 to Johansson et al. (see figure 1; lacks coupler end engagement shoulders as well as a torque element)

U.S. Patent 3,645,570 to Johansson et al. (see figure 1; lacks coupler end engagement shoulders as well as a torque element)


U.S. Patent 2,853,328 to Halgren (see figure 1; lacks disclosure of intermediate torque element as well as any compressive contact on the end member end faces)

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan M Flandro whose telephone number is (703) 305-6952. The examiner can normally be reached on 8:30am - 5:30pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on (703) 308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9326 for regular communications and (703) 872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

RMF
December 24, 2003


John R. Cottingham
Patent Examiner

Lynne H. Browne
Supervisory Patent Examiner
Technology Center 3670